

## **IN THE CLAIMS**

1. (canceled)

2. (currently amended) A congestion control unit ~~according to claim 1, wherein~~  
comprising:  
an input data measurement section for measuring a quantity of packet data to be inputted;  
and  
a packet discarding judgment section for conducting a discarding judgment of an arriving  
packet and outputting a packet not to be discarded into an output queue and the input data  
measurement section,  
the input data measurement section including a measurement section for outputting a  
constant quantity of packet data, which are inputted from the packet discarding judgment section,  
at a predetermined period and also including a smooth queue length calculating section for  
accumulating data outputted from the measurement section and outputting a constant quantity of  
accumulated data in the predetermined period, wherein  
the packet discarding judgment section conducts congestion control by a packet  
discarding judgment based on a smooth queue length which is a quantity of accumulated data  
composed of a difference between a quantity of input data and a quantity of output data at each  
predetermined period in the smooth queue length calculating section, and  
the input data measurement section periodically estimates a tendency of an increase in the  
smooth queue length, in the future, from a quantity of data accumulated in the input data  
measurement section, informs the packet discarding judgment section of the result of the  
estimation of the increase of the smooth queue length, and conducts batch processing in a period  
capable of being estimated, after the period capable of being estimated has passed.

3. **(original)** A congestion control unit according to claim 2, wherein the packet discarding judgment section calculates the time, at which the smooth queue length exceeds a threshold value, from a quantity of the future increase in the smooth queue length which has been informed, and judges whether an arriving packet is made to pass or is discarded according to the time.

4. **(currently amended)** A congestion control unit ~~according to claim 1, wherein~~ comprising:

an input data measurement section for measuring a quantity of packet data to be inputted;  
and  
a packet discarding judgment section for conducting a discarding judgment of an arriving packet and outputting a packet not to be discarded into an output queue and the input data measurement section,

the input data measurement section including a measurement section for outputting a constant quantity of packet data, which are inputted from the packet discarding judgment section, at a predetermined period and also including a smooth queue length calculating section for accumulating data outputted from the measurement section and outputting a constant quantity of accumulated data in the predetermined period, wherein

the packet discarding judgment section conducts congestion control by a packet discarding judgment based on a smooth queue length which is a quantity of accumulated data composed of a difference between a quantity of input data and a quantity of output data at each predetermined period in the smooth queue length calculating section, and

the packet discarding judgment section judges whether an arriving packet is made to pass or is discarded according to the packet discarding probability in which the smooth queue length is used as a parameter.

5. **(currently amended)** A congestion control unit ~~according to claim 1, wherein~~  
comprising:  
an input data measurement section for measuring a quantity of packet data to be inputted;  
and  
a packet discarding judgment section for conducting a discarding judgment of an arriving  
packet and outputting a packet not to be discarded into an output queue and the input data  
measurement section,

the input data measurement section including a measurement section for outputting a  
constant quantity of packet data, which are inputted from the packet discarding judgment section,  
at a predetermined period and also including a smooth queue length calculating section for  
accumulating data outputted from the measurement section and outputting a constant quantity of  
accumulated data in the predetermined period, wherein

the packet discarding judgment section conducts congestion control by a packet  
discarding judgment based on a smooth queue length which is a quantity of accumulated data  
composed of a difference between a quantity of input data and a quantity of output data at each  
predetermined period in the smooth queue length calculating section, and

the smooth queue length calculating section includes a memory device or pointing device  
for calculating and displaying a quantity of accumulated data composed of a difference between  
the quantity of input data and the quantity of output data.